

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

AI 1. ~~An image information display~~ A method for forming a hierarchical structure of representative images for use in editing a motion picture, wherein said hierarchical structure including a plurality of representative images is displayed on a screen of a display device, each of said representative images represents a series of frame images forming said motion picture, said method of forming a hierarchical structure ~~a representative image representing a series of frame images forming the motion picture is displayed on a screen of a display device and a hierarchical structure based on a plurality of the representative images is displayed on said screen, said method comprising the steps of;~~

selecting first representative images representing a series of said frame images ~~in each of which a predetermined object to be detected is included, from said representative images based on an image detection processing;~~

performing an image detection processing for detecting a predetermined object from a series of frame images corresponding to said selected first representative images;

displaying a first information showing that said predetermined object is included in a series of said frame images on said screen, as a result of said image detection processing ~~relating to said representative images including said first~~

~~representative images, to which said image detection processing has been performed, on said screen; and~~

~~displaying a second information showing that said image detection processing has not been performed yet in a series of said frame images; and relating to said representative images, to which said image detection processing has not been performed, yet, with said first information, simultaneously, on said screen~~

~~forming said hierarchical structure based on said first representative images corresponding to a series of said frame images within which said predetermined object has been detected.~~

2. (currently amended) ~~An image information displaying~~ A method according to claim 1, wherein in the step of displaying said first information, said frame first representative images including said predetermined object and said frame representative images not including said predetermined object are distinctively displayed.

3. (currently amended) ~~An image information displaying~~ A method according to claim 1, wherein said image detection processing is performed based on the basis of one or more features possessed by said predetermined object, said features stored in a storage device, and said representative images to which said image detection processing has not been applied are applied to said image detection processing on the basis of a same features.

4. (original) ~~An image information displaying~~A method according to Claim 1, wherein said predetermined object is the image of an object appearing in said motion picture.

5. (original) ~~An image information displaying~~A method according to Claim 1, further comprising a step of:
A1 deleting a part of said first information on said screen.

6. (original) ~~An image information displaying~~A method according to Claim 1, further comprising a step of:
performing separately plural image detection processings on the basis of different features for predetermined objects, and displaying in combination of results of said plural image detection processings on said screen.

Claims 7 and 8 (canceled).

9. (original) ~~An image information displaying~~A method according to Claim 1, further comprising a step of:
displaying, said representative image combined with additional information which relates to said predetermined object detected by said image detection processing, on said screen.

10. (original) ~~An image information displaying~~A method according to Claim 1, further comprising a step of:

varying a display area of said first information on said screen.

11. (currently amended)~~An image information displaying~~A method according to Claim 1, further comprising ~~a step~~the steps of:

selecting one of said representative images constructing said hierarchical structure₁ and ~~a step of~~

applying said image detection processing to a series of frame images corresponding to said selected representative image₁

wherein the results of said image detection processing are included in said representative images arranged at the lowest position of said hierarchical structure.

12. (currently amended)An image information displaying method according to Claim 1, wherein said representative image is displayed in multi-layers ~~the form of a series of frame images~~ ~~solid figure~~ on said screen, and said frame images containing said predetermined object detected in said image detection processing and said frame images containing no said predetermined object ~~image~~ are distinctively displayed on a side face portion of said multi-layers form~~solid figure~~.

13. (currently amended)An image information displaying method according to Claim 1, further comprising a step of:

displaying three windows simultaneously on said screen, said three windows including a first window which displays said hierarchical structure to edit the motion picture, a second window which displays the selected first representative images a ~~plurality of frame images~~ applied said image detection processing, and a third window which displays the detection result of said image detection processing corresponding to said the selected first representative images, ~~wherein the operations of said three windows are linked with each other.~~

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14. (currently amended)An image information displaying method according to Claim 13, wherein said representative images are displayed in said first window with an image size so that ~~with which~~ said hierarchical structure formed by ~~based on~~ said representative images can be displayed in said first window, and the displayed representative image is designated by the GUI so that said image detection processing is applied to the designated representative image~~the designated representative image is applied to said image detection processing.~~

Claims 15 and 16 (canceled).

17. (currently amended)An image information displaying method ~~according to Claim 1~~ for editing a motion picture, wherein a representative image representing a series of frame images forming the motion picture is displayed on a screen of a display device and a hierarchical structure based on a plurality of the representative images is displayed on said screen, said method comprising the steps of:

selecting first representative images in each of which a predetermined object to be detected is included, from said representative images based on an image detection processing;

displaying a first information relating to said representative images including said first representative images, to which said image detection processing has been performed, on said screen; and

displaying a second information relating to said representative images, to which said image detection processing has not been performed, yet, with said first information, simultaneously, on said screen,

wherein said image detection processing comprises the steps of~~includes:~~

~~a step of~~ displaying an object frame on the detected predetermined object, said object frame designating a part of a selected frame image which contains said predetermined object;

~~a step of~~ making the judgement~~judgment~~ of whether or not the same image information as image information of a region enclosed by said object frame is included in the plurality of frame images applied to said image detection processing; and

~~a step of~~ changing at least one of the size and position of said object frame by operating icons displayed on said screen.

18. (currently amended)An image information displaying apparatus for editing a motion picture, comprising:

a display device having a screen for displaying representative images representing a series of frame images forming the motion picture;

a control device for controlling image information displayed on said screen;

a storage device for storing said frame images, said image information and data for managing said frame images and said image information; and

an input device for inputting data into said control device,

wherein said control device comprises~~includes~~

A1 means for selecting first representative images representing a series of said frame images;

means for performing an image detection processing for detecting a predetermined object from a series of frame images corresponding to said selected first representative images;

means for displaying a first information showing that said predetermined object is included in a series of said frame images on said screen, as a result of said image detection processing and displaying a second information showing that said image detection processing has not been performed yet in a series of said frame images; and

means for forming said hierarchical structure based on said first representative images corresponding to a series of said frame images which said predetermined object have been detected.~~constructing a hierarchical structure comprising a plurality of representative images on the basis of data inputted by said input device; detecting means for detecting a plurality of frame images including a predetermined object to be detected on the basis of an image detection processing;~~

~~means for displaying a first information indicative of the detected frame image having said predetermined object on said screen, and means for displaying a second information concerning frame images being not applied said image detection processing, on said screen.~~

19. (currently amended) A computer program embodied on a computer readable medium for the display of image information for editing a motion picture, said computer readable medium having computer readable program code means comprising:

means for selecting first representative images representing a series of said frame images;

means for performing an image detection processing for detecting a predetermined object from a series of frame images corresponding to said selected first representative images;

means for displaying a first information showing that said predetermined object is included in a series of said frame images on said screen, as a result of said image detection processing and displaying a second information showing that said image detection processing has not been performed, yet, in a series of said frame images; and

means for forming said hierarchical structure based on said first representative images corresponding to a series of said frame images which said predetermined object have been detected.

~~means for displaying representative images representing a series of frame images forming the motion picture on a screen of a display device;~~

~~means for constructing a hierarchical structure based on a plurality of representative images generated and displaying on said screen on the basis of inputted instruction data;~~

A1 ~~means for detecting a plurality of frame images including in said representative image by applying an image detection processing, said frame images having a predetermined object to be detected;~~

~~means for displaying a first information indicative of the detected frame image having the predetermined object on said screen; and~~

~~means for displaying a second information images being not applied with said image detecting processing.~~

A2 20. (new): A method of displaying for editing a motion picture, wherein a hierarchical structure based on a plurality of representative images is displayed on a screen of a display device, each of which represents a series of frame images forming said motion picture, said method comprising the steps of:

selecting representative images representing a series of said frame images;

performing an image detection processing for detecting a predetermined object from a series of frame images corresponding to said selected first representative images;

displaying said predetermined object;

displaying a first information showing that said predetermined object is included in a series of said frame images on said screen, as a result of said image detection processing; and

displaying a second information showing that said image detection processing has not been performed yet in a series of said frame images.

21. (new): An image information displaying method for editing a motion picture, wherein a hierarchical structure based on a plurality of representative images is displayed on said screen of a display device, each of which represents a series of frame images forming said motion picture, said method comprising the steps of:

selecting first representative images representing a series of said frame images;

performing an image detection processing for detecting a predetermined object from a series of frame images corresponding to said selected first representative images;

displaying a first information showing that said predetermined object is included in a series of said frame images on said screen, as a result of said image detection processing; and

displaying a second information showing that said image detection processing has not been performed yet in a series of said frame images;

wherein said image detection processing includes:

a step of displaying an object frame on the detected predetermined object, said object frame designating a part of a selected frame image which contains said predetermined object;

an a step of making the judgment or whether or not the same image information as image information of a region enclosed by said object frame is included in the plurality of frame images applied to said image detection processing; and

a step of changing at least one of the size and position of said object frame by operating icons displayed on said screen.
